TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 1, 2010

Mr. Gary Miller, Remedial Project Manager
U.S. EPA, Region 6
Superfund Division (6SF-RA)
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Re: *Final Baseline Human Health Risk Assessment (BHHRA)*, dated February 8, 2010
Comments
Gulfco Marine Maintenance Federal Superfund Site
Freeport, Brazoria County, TX

Dear Mr. Miller:

The Texas Commission on Environmental Quality (TCEQ), Remediation Division and Toxicology Division (TD), have completed the review of the *Final Baseline Human Health Risk Assessment (BHHRA)*, dated February 8, 2010. The final BHHRA was prepared by Pastor, Behling, & Wheeler, LLC of Round Rock, Texas on behalf of LDL Coastal Limited LP, Chromalloy American Corporation, and Dow Chemical Company, collectively referred to as the Gulfco Restoration Group.

TCEQ provided comments on the draft BHHRA in the November 5, 2009 letter. While there are differences between the Texas Risk Reduction Program (TRRP) and Risk Assessment Guidance for Superfund (RAGS), TCEQ attempted to limit comments to those instances where such differences had a significant effect on the conduction or conclusions of the BHHRA or were important for the determination of health protectiveness as evaluated under TRRP. TCEQ reviewed responses to comments (Attachment A of the February 8, 2010 conveyance letter) and relevant sections of the final BHHRA to ensure that previous TCEQ comments were adequately addressed. TCEQ comments from the November 5, 2009 letter that required responses are provided in *italics* below and are followed by comments on the response (e.g., revisions/additions) provided for the final BHHRA.

2.2 Identification of Potential Chemicals of Concern

This section of the BHHRA refers to a screening process which is not consistent with §350.71(k) of TRRP. Additionally, the first paragraph appears to contain a misstatement where it indicates that compounds were eliminated from further consideration if...4) they were detected at a high concentration. In this particular case, the description of the screening process, which considered TCEQ human health criteria, and review of data summary tables suggest that chemicals likely to contribute significantly to risk/hazard for the receptors evaluated were included in the BHHRA.

TCEQ Comment: This comment was addressed to the extent necessary for this BHHRA.

3.2 Potentially Exposed Populations

Although off-site dust and VOC emissions were evaluated for the South area, they were not for the North area. TRRP §350.71 requires the evaluation of vapor and particulate from surface soil (and vapor from subsurface soil). TCEQ does not believe that abundant vegetation on the upland portion of the North area, for example, is a competent existing physical control for preventing emissions to ambient air.

TCEQ Comment: This comment was addressed to the extent necessary for this BHHRA.

3.4.3 Exposure Assumptions and Intake Calculations

This section of the BHHRA indicates that TCEQ residential soil-to-air PCLs (30-acre) were used to evaluate off-site residential exposure to vapor and particulate from the South area. However, the actual PCLs used in Tables 23 and 24 for this evaluation ($^{Air}Soil_{Inh\text{-}V}$ PCLs) only consider vapor, and do not include contributions from particulate. TRRP $^{Air}Soil_{Inh\text{-}VP}$ PCLs apply to commercial/industrial surface soil (0-5 feet below ground surface (bgs)), while $^{Air}Soil_{Inh\text{-}V}$ PCLs apply to subsurface soils. There are more $^{Air}Soil_{Inh\text{-}VP}$ PCLs than $^{Air}Soil_{Inh\text{-}V}$ PCLs (e.g., metals), and residential $^{Air}Soil_{Inh\text{-}VP}$ PCLs are available in Table 6 at www.tceq.state.tx.us/remediation/trrp/trrppcls.html.

TCEQ Comment: The response to this comment indicates that $^{Air}Soil_{Inh\text{-}VP}$ PCLs were added to Tables 23 and 24. However, these BHHRA tables concern exposure assumptions and not $^{Air}Soil_{Inh\text{-}VP}$ PCLs. TCEQ assumes the respondent meant that these PCLs were included in Tables 16 and 17, which adequately addressed TD's comment.

Tables 4, 11, and 12

These tables evaluate or screen surface water results only from a recreational receptor perspective. TD deferred to other TCEQ staff the determination as to whether the Texas Surface Water Quality Standards (TSWQS; 30 TAC §307.1-307.10) apply to various waterbodies (e.g., intracoastal waterway, wetland surface water), and if so, what particular values apply (e.g., sustainable fishery) and should be used for evaluation of analytical results. The Remediation Division indicated:

Intracoastal Waterway (ICWW) - The ICWW is tidal and so by definition is a sustainable fishery (§307.6(d)(5)(D)). The TSWQS salt water fish criteria apply.

Wetlands - The information provided by the TCEQ project manager indicates that these are salt water wetlands. Per Table 3-1 of TRRP-24 guidance, salt water wetlands (both permanently inundated and not) need to meet the TSWQS salt water fish criteria.

Two freshwater ponds – Based on the available to the TCEQ information, both of these ponds are perennial. Both appear to be less than 50 surface acres, and therefore would not be sustainable fisheries by definition (§307.6(d)(5)(C)). However, since they are perennial, they should be evaluated as incidental fisheries (§307.6(d)(6)), and the TSWQS freshwater fish tissue only values multiplied by 10 apply.

The human health SW RBELs published by TCEQ (which incorporate the above-referenced values) are available at http://www.tceq.state.tx.us/assets/public/remediation/trrp/swrbelstable.pdf.

TCEQ Comment: TCEQ's concern was adequately addressed. As a result of the TSWQS comparisons performed in the final BHHRA, TCEQ notes the following:

For the wetlands, the maximum and average concentrations of manganese (detected in 4 of 4 samples) and mercury (detected in 2 of 4 samples) exceed their respective TSWQS salt water fish criteria (see Table 11). Based on dissolved concentrations for the wetlands, the maximum concentration of manganese (detected in 4 of 4 samples) exceeds its TSWQS salt water fish criterion (mercury results not reported) (see Table 11).

For the ponds, the maximum concentrations of dibenz(a,h)anthracene (detected in 1 of 6 samples), indeno(1,2,3-cd)pyrene (detected in 1 of 6 samples), thallium (detected in 2 of 6 samples), and manganese (dissolved; detected in 6 of 6 samples) exceed their respective salt water fish criteria x 10 (see Table 12). Based on Table 12 data, arsenic does not exceed as stated on page 13 of the BHHRA. Information regarding the potential for the ponds and wetlands to serve as habitat for fish and to be used for fishing is included on pages 13 and 18 of the BHHRA. For the ICWW background area, the maximum and average concentrations of aldrin (detected in 4 of 4 samples) exceed the TSWQS salt water fish criterion, and the maximum concentrations of 4,4'-DDD (detected in 2 of 4 samples), 4,4'-DDT (detected in 1 of 4 samples), and benzo(k)fluoranthene (detected in 1 of 4 samples) exceed their respective salt water fish criteria (see Table 5 of the BHHRA). Conclusions of the fish ingestion BHHRA are not considered by TCEQ to be relevant/deterministic for this determination as the TSWQS and RBELs are ARARs.

If you have any questions please, contact me at (512) 239-6368 or Kip Haney at (512) -239-5691.

Sincerely,

Ludmila Voskov, P.G., Project Manager
Superfund Section
Remediation Division
Texas Commission on Environmental Quality

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